Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A catalytic device comprised of a catalyst support of fused ceramic grains and a catalyst that is surface-bound to at least a portion of the ceramic grains, incorporated into at least a portion of the ceramic grains or combinations thereof, wherein the grains and catalyst form a surface structure that has a box counting dimension of at least 1.2 or the box counting dimension has at least a one step change when measured from a box size "d" of at least about 1.0 micrometer to at most about 1 millimeter.

2. (previously presented) A catalytic device comprised of a catalyst support of fused ceramic grains and a catalyst that is surface-bound to at least a portion of the ceramic grains, incorporated into at least a portion of the ceramic grains or combinations thereof, wherein the grains and catalyst form a surface structure that has a box counting dimension of at least 1.2 or the box counting dimension has at least a one step change when measured from a box size "d" of at least about 1.0 micrometer to at most about 1 millimeter, wherein the ceramic grains have at least one catalytically active element incorporated therein.

3. (original) The catalytic device of Claim 1 wherein the ceramic grains are acicular mullite grains.

4. (original) The catalytic device of Claim 1 wherein the catalyst support is porous.

5. (original) The catalytic device of Claim 1 wherein the ceramic grains have an aspect ratio of at least about 10.

6. (original) The catalytic device of Claim 4 wherein the porous catalyst support has a porosity of at least about 50 percent by volume.

7. (original) The catalytic device of Claim 6 wherein the porosity is at least about 60 percent by volume.

8. (original) The catalytic device of Claim 7 wherein the porosity is at least about 70 percent by volume.

9. (original) The catalytic device of Claim 8 wherein the catalyst support is attached to a surface of a structural support that is comprised of a different material having a porosity less than the porosity of the catalyst support.

10. (original) The catalytic device of Claim 9 wherein the different material is a metal, a ceramic having grains that are substantially symmetrical or combination thereof.

11. (original) The catalytic device of Claim 10 wherein the structural support is the ceramic.

12. (original) The catalytic device of Claim 11 wherein the ceramic is cordierite.

13. (original) The catalytic device of Claim 12 wherein the catalyst support is mullite.

14. (original) The catalytic device of Claim 1 wherein the catalyst is a ceramic, metal or mixture thereof.

15. (original) The catalytic device of Claim 14 wherein the catalyst is comprised of an element selected from the group consisting of Ni, Ti, Fe, Ce, Zr, La, Mg, Ca and combinations thereof.

16. (previously presented) A catalytic device comprised of a catalyst support of fused ceramic grains and a catalyst that is surface-bound to at least a portion of the ceramic grains, incorporated into at least a portion of the ceramic grains or combinations thereof, wherein the grains and catalyst form a surface structure that has a box counting dimension of at least 1.2 or the box counting dimension has at least a one step change when measured from a box size "d" of at least about 1.0 micrometer to at most about 1 millimeter, wherein the catalyst is a zeolite having a metal thereon, alumina having a metal thereon or an aluminosilicate other than mullite having a metal thereon, perovskite-type catalyst or pyrochlors.

17. (original) The catalytic device of Claim 1 wherein the catalyst is directly bound to the ceramic grains of the catalyst support.

18. (original) The catalytic device of Claim 17 wherein the catalyst is a precious metal, base metal, base metal oxide or combinations thereof.

19. (original) The catalytic device of Claim 18 wherein the catalyst is selected from the group consisting of platinum, rhodium, palladium and combinations thereof.

20. (original) The catalytic device of Claim 18 wherein the base metal is selected from the group consisting of Cu, Cr, Fe, Co, Ni and combinations thereof.

21. (original) The catalytic device of Claim 1 wherein the catalyst is bound to at least a portion of the surface of the grains forming a layer, such that at least about 10 percent of the grains bound by the catalyst have a layer thickness of at most about 1/2 the thickness of the smallest dimension of each grain coated.

22. (original) The catalytic device of Claim 21 wherein at least about 10 percent of the grains bound by the catalyst have a layer thickness that is 1/4 the thickness of the smallest dimension of each grain coated.

23. (original) A catalytic converter comprised of the catalytic device of Claim 1 that is enclosed within a metal container that has an inlet and outlet for flowing a gas over the catalytic device.

24. (original) The catalytic converter of Claim 23 wherein the converter reaches light-off in a shorter period of time than a catalytic converter using a conventional catalytic converter under the same conditions.

25. (original) A catalytic converter comprised of the catalytic device of Claim 4 that is enclosed within a metal container that has an inlet and outlet for flowing a gas through the catalytic device.

26. (original) A catalytic converter-soot trap comprised of the catalytic device of Claim 4 enclosed within a metal container having an inlet and outlet for flowing a gas through the catalytic device.

27. (original) The catalytic converter of Claim 23 wherein the converter has a light-off temperature that is lower than a conventional converter comprised of a

cordierite or metal honeycomb substrate prepared with substantially the same catalyst and tested under substantially the same conditions.

28. (original) The catalytic device of Claim 16 wherein the device has a light-off temperature that is lower than a conventional device comprised of a cordierite or metal honeycomb substrate prepared with substantially the same catalyst and tested under substantially the same conditions.

29. (original) The catalytic device of Claim 28 wherein the catalyst is comprised of alumina having a metal thereon.

30. (original) The catalytic converter of Claim 23 wherein the converter has an extinction temperature that is lower than a conventional converter comprised of a cordierite or metal honeycomb substrate prepared with substantially the same catalyst and tested under substantially the same conditions.

31. (original) The catalytic device of Claim 16 wherein the device has an extinction temperature that is lower than a conventional device comprised of a cordierite or metal honeycomb substrate prepared with substantially the same catalyst and tested under substantially the same conditions.

32. (currently amended) The catalytic device of Claim 1 wherein [[t]] the grains and catalyst form a surface structure that has a box counting dimension of at least 1.2 measured from a box size "d" of at least 1 micrometer to a box size of at most 1 millimeter.

33. (currently amended) The catalytic device of Claim 32 wherein [[t]] the grains and catalyst form a surface structure that has a box counting dimension of at least 1.5 measured from a box size "d" of at least 1 micrometer to a box size of at most 1 millimeter.

34. (previously presented) The catalytic device of Claim 1 wherein the grains and catalyst form a surface structure that has a box counting dimension having at least one step change when measured from a box size "d" of at least 1 micrometer to a box size of at most 1 millimeter.

35. (previously presented) The catalytic device of Claim 34 wherein the grains and catalyst form a surface structure that has a box counting dimension having at least two step changes.

36. (previously presented) The catalytic device of Claim 1 wherein the grains and catalyst form a surface structure that has a box counting dimension having at least 4 step changes.

37. (new) The catalytic device of Claim 1 wherein substantially all of the ceramic grains are acicular ceramic grains.